

APPENDIX J

LIST OF FLAGGED SAMPLES FOR THE SCAQMD PAMS AND ARB PAMS-LIKE SITES 1999 AND 2000

The 1999 and 2000 PAMS and PAMS-like data were downloaded from the EPA's AIRS database. The data were then brought into STI's data validation software, VOCDat, for review. To assess the validity of the data, we inspected a time series plot of every species, prepared numerous scatter plots, including a plot of every species and species group versus the total mass, and inspected the fingerprint plot of every sample. Our strategy is to flag entire samples when we identify a problem with two or more of the most abundant species (e.g., toluene, i-pentane, n-pentane, i-butane, n-butane, benzene, acetylene, ethane, xylenes, and ethene). We also flag samples when only one hydrocarbon has been identified as problematic if that hydrocarbon represents a significant portion of the total nonmethane organic compounds (TNMOC - e.g., more than 20%). Individual species are also flagged as suspect when there are problems noted but the concentration of the hydrocarbon is low compared to other species in the sample. In some cases, the samples may have an analytical error that needs to be corrected, may have a sampling problem that was inadvertently missed, or may just appear odd. Upon review of the data by the reporting agency or analytical laboratories, some suspect data may be deemed invalid, some data may be reprocessed and re-reported, and other data may remain suspect (cause unknown). These latter samples remain flagged in our working database and in this report for the attention of data analysts.

This appendix contains three tables. **Table J-1** lists the samples and individual hydrocarbons that were flagged as suspect during this review. It is set up as follows:

- Date/Time = Date of sample(s) flagged and begin hour in Pacific Standard Time (PST) of the flagged samples
- Record/Species = A designation of the individual hydrocarbon or the entire sample record to which the flag applies
- N = Number of affected samples

- QC Code = the quality control code indicates suspect data. For a sample or individual hydrocarbon to be flagged as invalid, a documented explanation needs to be provided (e.g., instrument failure, known contamination, data not representative of ambient air such as calibration gas, etc.). A QC code of 7, Suspect, was the only code used in this review.
- Comment = Comments regarding why samples were flagged

Table J-2 summarizes the number of samples available and the number of samples with a suspect specie(s). **Table J-3** provides the definitions of the species abbreviations.

Table J-4 lists the abbreviations used by DRI to identify its extensive list of species reported in the special study samples. The table also contains the compound formula, units reported, conversion factor (from ppbC to $\mu\text{g}/\text{m}^3$), number of carbons, and molecular weight (MW). Footnotes to the table provide additional information.

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Azusa	7/2/99 23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/4/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	7	7	low concentrations
Azusa	7/5/99 23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/7/1999 2:00-23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	7	7	low concentrations
Azusa	7/8/99 23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/10/1999 2:00-8:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	3	7	low concentrations
Azusa	7/10/99 14:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/10/99 20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/11/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	7/13/1999 2:00-20:00	ebenz, noct, TNMOC	7	7	low concentrations
Azusa	7/14/99 23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/16/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	7	7	low concentrations
Azusa	7/17/99 23:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	1	7	low concentrations
Azusa	7/19/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	7	7	low concentrations
Azusa	7/20/00 14:00	oxyl	1	7	low relative to mpoxyl
Azusa	7/20/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	7/22/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, t2bte	7	7	low concentrations
Azusa	7/22/99 23:00	123tmb, ebenz, nnon, noct, oxyl, styr	1	7	low concentrations, 123tmb odd
Azusa	7/25/1999 2:00-23:00	ebenz, nnon, noct, oxyl, styr	7	7	low concentrations

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Azusa	7/26/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	7/28/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr,t2bte	7	7	low concentrations
Azusa	7/29/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	7/31/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr,t2bte	7	7	low concentrations
Azusa	8/1/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	8/3/1999 2:00-20:00	1bute, c2bte, ebenz, isbta, nbuta, nnon, noct, oxyl, styr,t2bte	7	7	low concentrations
Azusa	8/4/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	8/6/1999 2:00-20:00	1bute, ebenz, isbta, nbuta, nnon, noct, oxyl, styr, TNMOC	7	7	low concentrations
Azusa	8/7/99 17:00	nnon, noct	1	7	low concentrations
Azusa	8/7/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	8/9/1999 2:00-20:00	1bute, ebenz, isbta, nbuta, nnon, noct, oxyl, TNMOC	7	7	low concentrations
Azusa	8/10/99 2:00	styr	1	7	low concentrations
Azusa	8/10/99 5:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	8/10/99 14:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Azusa	8/10/99 23:00	ebenz, nnon, noct, oxyl, styr	1	7	low concentrations
Banning	7/20/99 8:00	styr	1	7	styr high concentration, odd
Banning	7/23/99 5:00	Record	1	7	low C2-C3 species, some mid range
Banning	7/29/99 14:00	ethan	1	7	ethan high
Banning	8/4/99 8:00	ispna	1	7	ispna high, odd
Banning	8/13/99 11:00	123tmb	1	7	123tmb high, odd
Banning	9/9/99 17:00	ispna	1	7	ispna high
Banning	9/21/99 5:00	styr	1	7	styr high, odd
Burbank	6/30/1999 2:00-17:00	ethan	6	7	no ethane
Burbank	6/30/99 20:00	Record	1	7	all C2-C3 species zero
Burbank	7/5/1999 5:00-23:00	ethan	6	7	no ethane
Burbank	7/6/99 2:00	ethan	1	7	no ethane
Burbank	7/21/99 8:00	Record	1	7	all C2-C3 species zero

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	7/21/99 11:00	Record	1	7	all C2-C3 species zero, ispna = zero
Burbank	7/24/99 2:00	ethan	1	7	no ethane
Burbank	7/24/99 5:00	ethan	1	7	no ethane
Burbank	7/24/99 20:00	ethan	1	7	no ethane
Burbank	7/25/99 2:00	ethan, ethyl	1	7	zero
Burbank	7/25/99 14:00	ispna	1	7	ispna = zero
Burbank	7/25/99 17:00	ethan, ethyl, ispna	1	7	no ethane, no ethene, ispna = zero
Burbank	7/26/99 2:00	ispna	1	7	ispna = zero
Burbank	7/26/1999 17:00-20:00	ethan	2	7	no ethane
Burbank	7/27/1999 8:00,14:00, 17:00	ethan, ethyl	3	7	no ethane, no ethene
Burbank	7/28/99 2:00	ethan	1	7	no ethane
Burbank	7/28/99 5:00	Record	1	7	all C2-C3 species zero
Burbank	7/28/1999 17:00-23:00	ethan	3	7	no ethane
Burbank	7/29/1999 2:00-5:00	ethan	2	7	no ethane
Burbank	7/29/99 8:00	benz	1	7	low benzene
Burbank	7/29/99 11:00	Record	1	7	all C2-C3 species zero
Burbank	7/29/99 23:00	ethan	1	7	no ethane
Burbank	7/30/99 2:00	Record	1	7	all C2-C3 species zero
Burbank	8/5/99 5:00	Record	1	7	all C2-C3 species zero
Burbank	8/5/99 23:00	Record	1	7	all C2-C3 species zero
Burbank	8/7/99 23:00	Record	1	7	all C2-C3 species zero
Burbank	8/10/1999 2:00-5:00	ethan	2	7	no ethane
Burbank	8/10/1999 8:00, 14:00	Record	2	7	all C2-C3 species zero
Burbank	8/10/1999 17:00-23:00	ethan	3	7	no ethane
Burbank	8/12/1999 2:00-5:00	ethan	2	7	no ethane
Burbank	8/12/99 8:00	Record	1	7	all C2-C3 species zero
Burbank	8/13/99 11:00	mxyl, pxy	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/13/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/14/99 20:00	mxyl, pxy	1	7	mxyl and pxy = low relative to o-xyl

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	8/15/99 2:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/15/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/16/99 11:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/18/99 2:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/18/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/22/99 8:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/22/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/23/99 11:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/23/99 14:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/24/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/25/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/25/99 14:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to o-xyl
Burbank	8/26/99 14:00	Record	1	7	all C2-C3 species zero
Burbank	8/26/1999 17:00-23:00	ethan	3	7	no ethane
Burbank	8/26/1999 20:00-23:00	ethan	2	7	no ethane
Burbank	8/27/1999 2:00-5:00	ethan	2	7	no ethane
Burbank	8/27/99 8:00	Record	1	7	all C2-C3 species zero
Burbank	8/27/99 11:00	3mhxa	1	7	low compared to others
Burbank	8/27/99 14:00	mxyl	1	7	low relative to p,o-xyl
Burbank	8/27/99 17:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	8/28/1999 11:00-14:00	mxyl, pxy1	2	7	mxyl and pxy = low relative to p,o-xyl
Burbank	8/29/99 5:00	3mhxa	1	7	low compared to others
Burbank	8/31/99 20:00	pxy1	1	7	low relative to p,o-xyl
Burbank	9/2/99 14:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/2/99 23:00	mxyl, pxy1	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/3/99 2:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/3/99 8:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/5/99 2:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/5/99 20:00	Record	1	7	all C2-C3 species zero

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	9/8/99 11:00	Record	1	7	all C2-C3 species zero
Burbank	9/9/99 8:00	Record	1	7	all C2-C3 species zero
Burbank	9/10/99 14:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/11/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/12/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/13/99 8:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/14/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/16/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/17/99 8:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/18/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/19/99 8:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/19/99 17:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/21/99 8:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/21/99 14:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/24/99 14:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/24/99 20:00	pxyl	1	7	low relative to mxyl
Burbank	9/25/99 11:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/29/99 17:00	mxyl, pxy	1	7	mxyl and pxy = low relative to p,o-xyl
Burbank	9/30/99 14:00	mxyl	1	7	low relative to p,o-xyl
Burbank	9/30/99 23:00	ethan	1	7	no ethane
Burbank	7/2/2000 14:00-17:00	mxyl	2	7	low mxyl conc.
Burbank	7/3/00 5:00	23dmp	1	7	23dmp low
Burbank	7/4/00 5:00	2mhxa, benz	1	7	coleution or misidentification problems?
Burbank	7/4/00 14:00	mxyl	1	7	low mxyl concentration
Burbank	7/4/00 23:00	3mhxa	1	7	high
Burbank	7/5/00 14:00	3mhxa, mxyl	1	7	low concentrations
Burbank	7/5/00 17:00	2mhxa, benzene	1	7	coleution or misidentification problems?
Burbank	7/5/00 20:00	2mhxa, benzene	1	7	coleution or misidentification problems?
Burbank	7/7/00 23:00	23dmp, 2mpna	1	7	misidentification?

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	7/13/00 2:00	nhexa	1	7	low concentrations
Burbank	7/14/00 5:00	2mpna	1	7	misidentification with 23dmb
Burbank	7/15/00 2:00	2mpna	1	7	low 2mpna concentration
Burbank	7/15/2000 5:00-8:00	224tmp	2	7	low concentrations
Burbank	7/20/00 20:00	23dmp	1	7	23dmp low
Burbank	7/24/00 11:00	23dmb	1	7	high, odd
Burbank	7/26/00 8:00	2mpna	1	7	low 2mpna concentration
Burbank	7/27/00 17:00	224tmp	1	7	low concentrations
Burbank	7/27/00 20:00	23dmp	1	7	23dmp low
Burbank	7/28/00 20:00	23dmp	1	7	23dmp low
Burbank	7/28/00 23:00	2mpna, 23dmp	1	7	misidentification with 23dmb, 23dmb low
Burbank	7/29/00 14:00	3mhxa	1	7	low concentrations
Burbank	7/29/00 23:00	23dmp	1	7	23dmp low
Burbank	7/30/00 17:00	224tmp	1	7	low concentrations
Burbank	7/30/00 20:00	23dmp	1	7	23dmp low
Burbank	7/31/00 20:00	23dmp	1	7	23dmp low
Burbank	7/31/00 23:00	2mpna, 23dmp	1	7	low 2mpna concentration, 23dmb low
Burbank	8/1/00 20:00	23dmp	1	7	23dmp low
Burbank	8/2/00 20:00	23dmp	1	7	23dmp low
Burbank	8/4/00 20:00	23dmp	1	7	23dmp low
Burbank	8/9/00 14:00	3mpna	1	7	low relative to 2mpna
Burbank	8/9/00 20:00	23dmp	1	7	23dmp low
Burbank	8/9/00 23:00	23dmp	1	7	23dmp low
Burbank	8/10/2000 2:00-17:00	aceta	6	7	aceta low
Burbank	8/10/00 20:00	23dmp, aceta	1	7	23 dmp low, aceta low
Burbank	8/10/00 23:00	23dmp	1	7	23dmp low
Burbank	8/11/00 11:00	2mpna, aceta	1	7	low 2mpna concentration, aceta low
Burbank	8/11/00 17:00	aceta	1	7	aceta low
Burbank	8/11/00 20:00	23dmp, aceta	1	7	23 dmp low, aceta low

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	8/11/00 23:00	23dmp, aceta	1	7	23 dmp low, aceta low
Burbank	8/14/00 5:00	23dmp	1	7	low concentrations
Burbank	8/15/00 5:00	2mpna, 23dmp	1	7	low 2mpna, high 23dmp
Burbank	8/17/00 20:00	23dmp	1	7	23dmp low
Burbank	8/18/00 20:00	23dmp	1	7	23dmp low
Burbank	8/19/00 2:00	23dmp	1	7	23dmp low
Burbank	8/20/00 2:00	23dmp	1	7	23dmp low
Burbank	8/21/2000 17:00-20:00	23dmp	2	7	23dmp low
Burbank	8/22/00 17:00	23dmp	1	7	23dmp low
Burbank	8/23/00 17:00	224tmp	1	7	low concentrations
Burbank	9/3/00 5:00	2mpna	1	7	low 2mpna concentration
Burbank	9/4/00 2:00	nhexa	1	7	low concentrations
Burbank	9/7/00 8:00	npnta, 2mpna	1	7	low npnta concentration., low relative to 3mpna
Burbank	9/8/00 8:00	2mpna	1	7	low 2mpna concentration
Burbank	9/8/00 11:00	23dmp	1	7	low concentrations
Burbank	9/9/00 11:00	224tmp	1	7	low concentrations
Burbank	9/10/00 20:00	23dmp	1	7	low concentrations
Burbank	9/11/00 17:00	acet, 224tmp	1	7	high acet, low 224tmp
Burbank	9/11/2000 20:00-23:00	23dmp	2	7	low concentrations
Burbank	9/12/2000 20:00-23:00	23dmp	2	7	low concentrations
Burbank	9/14/00 20:00	23dmp	1	7	low concentrations
Burbank	9/15/00 20:00	23dmp	1	7	low concentrations
Burbank	9/15/00 23:00	2mpna, 23dmp	1	7	misidentification with 23dmb?, low 23dmp
Burbank	9/16/00 20:00	23dmp	1	7	low concentrations
Burbank	9/16/00 23:00	2mpna, 23dmp	1	7	low 2mpna concentration, low 23dmp
Burbank	9/22/2000 14:00-23:00	npnta	3	7	low concentrations npnta
Burbank	9/23/00 11:00	2mpna	1	7	low 2mpna concentration
Burbank	9/23/2000 20:00-23:00	npnta	2	7	low npnta concentration

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	9/24/2000 2:00-8:00	npnta	3	7	low npnta concentration
Burbank	9/25/00 20:00	npnta, 3mhxa	1	7	low npnta concentration., low 3mhxa
Burbank	9/25/00 23:00	npnta	1	7	low npnta concentration
Burbank	9/26/00 2:00	npnta, nhexa	1	7	low npnta concentration., low nhexa
Burbank	9/26/2000 5:00-17:00	npnta	4	7	low npnta concentration
Burbank	9/27/00 2:00	npnta, 2mpna	1	7	low npnta concentration., low relative to 3mpna
Burbank	9/27/00 8:00	2mpna	1	7	low 2mpna concentration
Burbank	9/28/00 17:00	npnta	1	7	low npnta concentration
Burbank	9/28/00 20:00	224tmp	1	7	low concentrations
Burbank	9/28/00 23:00	npnta	1	7	low npnta concentration
Burbank	9/29/00 5:00	3mpna	1	7	low relative to 2mpna
Burbank	9/29/00 11:00	npnta	1	7	low npnta concentration
Burbank	9/29/00 14:00	224tmp	1	7	low concentrations
Burbank	9/29/00 23:00	npnta	1	7	low npnta concentration
Burbank	9/30/00 2:00	npnta	1	7	low npnta concentration
Burbank	9/30/00 5:00	npnta, 2mpna	1	7	low npnta concentration., Low 2mpna concentration
Burbank	9/30/00 23:00	npnta	1	7	low npnta concentration
Burbank	10/1/00 2:00	224tmp	1	7	low concentrations
Burbank	10/1/00 5:00	npnta	1	7	low npnta concentration
Burbank	10/1/00 8:00	224tmp	1	7	low concentrations
Burbank	10/1/00 23:00	2mpna	1	7	low 2mpna concentration
Burbank	10/2/00 2:00	npnta	1	7	low npnta concentration
Burbank	10/2/00 23:00	npnta	1	7	low npnta concentration
Burbank	10/3/00 2:00	npnta	1	7	low npnta concentration
Burbank	10/3/00 20:00	3mpna	1	7	low relative to 2mpna
Burbank	10/3/00 23:00	npnta	1	7	low npnta concentration
Burbank	10/4/00 2:00	npnta	1	7	low npnta concentration
Burbank	10/4/00 11:00	npnta	1	7	low npnta concentration

Table J-1. Records and species flagged as Suspect (7) during data validation of the 1999 and 2000 SCAQMD PAMS and ARB PAMS-like data. Species abbreviations are provided in Table J-3.

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Site	Date/Time (PST)	Record/Specie	N	QC Code	Comment
Burbank	10/4/2000 20:00-23:00	npnta	2	7	low npnta concentration
Hawthorne	7/23/1999 5:00-11:00	Record	3	7	C2-C3 species are zero
Hawthorne	8/10/99 8:00	ispna	1	7	high isopentane concentration
Hawthorne	9/27/99 17:00	1pnte	1	7	1pnte high, odd
LA North Main	9/15/00 5:00	ispna	1	7	high ispna
Pico Rivera	7/16/00 14:00	uidvoc	1	7	TNMOC is low (units?)
Pico Rivera	7/19/00 5:00	Record	1	7	C2-C3 species all zero
Pico Rivera	7/20/00 2:00	ethyl	1	7	zero
Pico Rivera	7/20/00 5:00	Record	1	7	C2-C3 species all zero
Pico Rivera	9/5/00 20:00	ethyl	1	7	zero
Pico Rivera	9/7/2000 2:00-5:00	ethyl	2	7	zero
Pico Rivera	9/9/2000 5:00-8:00	ethyl	2	7	zero
Pico Rivera	9/11/00 8:00	ethyl	1	7	zero
Pico Rivera	9/12/00 5:00	2mhxa, propa	1	7	2mhxa = zero, propa = high
Pico Rivera	9/19/00 11:00	1pnte	1	7	high, odd
Pico Rivera	9/27/00 14:00	1pnte	1	7	high, odd
Pico Rivera	10/15/00 2:00	tolu	1	7	high, odd
Pico Rivera	10/16/00 8:00	tolu	1	7	high, odd
Santa Clarita	7/20/99 2:00	styr	1	7	low styr concentration
Santa Clarita	8/10/99 17:00	styr	1	7	low styr concentration
Santa Clarita	8/19/99 14:00	ispna	1	7	high
Santa Clarita	8/28/99 8:00	styr	1	7	low styr concentration
Santa Clarita	9/29/99 23:00	styr	1	7	low styr concentration
Santa Clarita	9/30/99 2:00	styr	1	7	low styr concentration
Santa Clarita	9/30/99 8:00	styr	1	7	low styr concentration
Santa Clarita	9/30/99 14:00	styr	1	7	low styr concentration
Santa Clarita	9/30/99 17:00	styr	1	7	low styr concentration
Santa Clarita	9/30/99 20:00	Record	1	7	zero C2-C3 species

Table J-2. Samples flagged.

Site	Year	No. Samples Available	No. Samples STI Flagged	Percent Flagged
Azusa	1999	210	108	5
	2000	195	0	0
Banning	1999	198	7	
	2000	carbonyls only	-	-
Burbank	1999	538	109	20
	2000	615	114	19
Hawthorne	1999	195	5	3
	2000	173	0	0
LA North Main	1999	62	0	0
	2000	29	1	3
Pico Rivera	1999	690	0	0
	2000	667	15	2
Santa Clarita	1999	200	10	5
	2000	carbonyls only	-	-
Upland	1999	215	0	0
	2000	199	0	0

Table J-3. AIRS code, abbreviation, hydrocarbon name, and species group (O=olefin, P=paraffin, A=aromatic).

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AIRS code	Abbreviation	Hydrocarbon	Species Group
43206	acety	Acetylene	O
43203	ethyl	Ethylene	O
43202	ethan	Ethane	P
43205	prpyl	Propylene	O
43204	propa	Propane	P
43214	isbta	Isobutane	P
43280	1bute	1-Butene	O
43212	nbuta	n-Butane	P
43216	t2bte	trans-2-Butene	O
43217	c2bte	cis-2-Butene	O
43282	3mlbe	3-Methyl-1-Butene	O
43221	ispna	Isopentane	P
43224	1pnte	1-Pentene	O
43220	npnta	n-Pentane	P
43243	ispre	Isoprene	O
43226	t2pne	trans-2-Pentene	O
43227	c2pne	cis-2-Pentene	O
43228	2m2be	2-Methyl-2-Butene	O
43244	22dmb	2,2-Dimethylbutane	P
43283	cypne	Cyclopentene	O
43234	4mlpe	4-Methyl-1-Pentene	O
43242	cypna	Cyclopentane	P
43284	23dmb	2,3-Dimethylbutane	P
43285	2mpna	2-Methylpentane	P
43230	3mpna	3-Methylpentane	P
43246	2m1pe	2-Methyl-1-Pentene	O
43231	nhexa	n-Hexane	P
43289	t2hex	trans-2-Hexene	O
43290	c2hex	cis-2-Hexene	O
43262	mcpna	Methylcyclopentane	P
43247	24dmp	2,4-Dimethylpentane	P
45201	benz	Benzene	A
43248	cyhx	Cyclohexane	P
43263	2mhxa	2-Methylhexane	P
43291	23dmp	2,3-Dimethylpentane	P
43249	3mhxa	3-Methylhexane	P
43250	224tmp	2,2,4-Trimethylpentane	P
43232	nhept	n-Heptane	P
43261	mcyhx	Methylcyclohexane	P
43252	234tmp	2,3,4-Trimethylpentane	P
45202	tolu	Toluene	A

Table J-3. AIRS code, abbreviation, hydrocarbon name, and species group (O=olefin, P=paraffin, A=aromatic).

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AIRS code	Abbreviation	Hydrocarbon	Species Group
43960	2mhep	2-Methylheptane	P
43253	3mhep	3-Methylheptane	P
43233	noct	n-Octane	P
45203	ebenz	Ethylbenzene	A
45109	m/pxy	m/p-Xylene	A
45205	mxyl	m-Xylene	A
45206	pxyl	p-Xylene	A
45220	styr	Styrene	A
45204	oxy1	o-Xylene	A
43235	nnon	n-Nonane	P
45210	ispbz	Isopropylbenzene	A
45209	npbz	n-Propylbenzene	A
43256	apine	alpha-Pinene	O
45207	135tmb	1,3,5-Trimethylbenzene	A
45208	124tmb	1,2,4-Trimethylbenzene	A
43257	bpine	beta-Pinene	O
45211	oetol	o-Ethyltoluene	A
45212	metol	m-Ethyltoluene	A
45213	petol	p-Ethyltoluene	A
45218	mdeben	m-diethylbenzene	A
45219	pdeben	p-diethylbenzene	A
45225	123tmb	1,2,3-trimethylbenzene	A
43238	ndec	n-Decane	P
43954	nundc	n-Undecane	P
43102	tnmoc	Total Non-Methane Organic Compounds	
43502	form	Formaldehyde	C
43503	aceta	Acetaldehyde	C
43551	acet	Acetone	C
43218	13buta	1,3-butadiene	O
43225	2m1bte	2-methyl-1-butene	O
43295	3ethex	3-ethylhexane	P
43955	25mhex	2,5-dimethylhexane	P
43293	hex24m	2,4-dimethylhexane	P
43294	hex23m	2,3-dimethylhexane	P
43222	propa22m	2,2-dimethylpropane	P
43270	ibute	Isobutene	O
43240	mcpne	Methylcyclopentene	O
43395	4mhpte	4-Methylheptane	P
43000	pamshc	Sum PAMS Target Species	

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
PAMS	sum of PAMS species						
OTHER	other identified to undecane						
UNID	unidentified to undecane						
TNMHC	total NMHC to undecane						
IDNMHC_p	TO14-FID identified NMHC	C ₁ H _{1.85}	ppbC		1	13.85	
UNID_p	TO14-FID unidentified		ppbC	0.567	1	13.85	
IDOXY	sum of oxygenates						
CARB	sum of carbonyls						
HALO	sum of halocarbons						
TENAX11	sum of tenax >undecane		$\mu\text{g}/\text{m}^3$				
METHAN	methane	CH ₄	ppmv	714.613	1	16.04	P
CO_PPM	carbon monoxide	CO	ppmv	1247.900	1	28.01	
CO2PPM	carbon dioxide	CO ₂	ppmv	1960.732	1	44.01	
pdfid	TNMHC by PDFID						
ETHANE	ethane	C ₂ H ₆	ppbC	0.670	2	30.07	P
ETHENE	ethene	C ₂ H ₄	ppbC	0.625	2	28.05	O
ACETYL	acetylene	C ₂ H ₂	ppbC	0.580	2	26.04	Y
LBUT1E	1-butene	C ₄ H ₈	ppbC	0.625	4	56.11	O
LIBUTE	iso-butene	C ₄ H ₈	ppbC	0.625	4	56.11	O
c2cmpd	sum of C2 compounds		ppbC		2		
PROPE	propene	C ₃ H ₆	ppbC	0.625	3	42.08	O
N_PROP	propane	C ₃ H ₈	ppbC	0.655	3	44.10	P
f12	F12 (dichlorodifluoromethane)	CF ₂ Cl ₂	ppbC	5.387	1	120.91	X
mecl	methylchloride	CH ₃ Cl	ppbC	2.249	1	50.49	X
I_BUTA	isobutane	C ₄ H ₁₀	ppbC	0.647	4	58.12	P
f114	F114 (dichlorotetrafluoroeth)	C ₂ F ₄ Cl ₂	ppbC	3.807	2	170.91	X
acetal	acetaldehyde	CH ₃ CHO	ppbC	0.981	2	44.05	AL
beabyl	1-butene + isobutylene	C ₄ H ₈	ppbC	0.625	4	56.11	O
BUDI13	1,3-butadiene	C ₄ H ₆	ppbC	0.602	4	54.09	O
N_BUTA	n-butane	C ₄ H ₁₀	ppbC	0.647	4	58.12	P
metoh	methanol	CH ₃ OH	ppbC	2.461	0.58	32.04	OH

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
T2BUTE	t-2-butene	C ₄ H ₈	ppbC	0.625	4	56.11	O
BUTYN	1&2-butyne	C ₄ H ₆	ppbC	0.602	4	54.09	Y
C2BUTE	c-2-butene	C ₄ H ₈	ppbC	0.625	4	56.11	O
f21			ppbC	5.387	1	120.91	X
B1E3ME	3-methyl-1-butene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
ETHOH	ethanol	C ₂ H ₅ OH	ppbC	1.739	1.18	46.07	OH
can	acetonitrile		ppbC		2	41.05	
propal	propionaldehyde	C ₂ H ₅ CHO	ppbC	0.863	3	58.08	AL
IPENTA	isopentane	C ₅ H ₁₂	ppbC	0.643	5	72.15	P
aceto	acetone	C ₃ H ₆ O	ppbC	0.863	3	58.08	K
PENTE1	1-pentene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
B1E2M	2-methyl-1-butene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
N_PENT	n-pentane	C ₅ H ₁₂	ppbC	0.643	5	72.15	P
pr2oh	i-propanol		ppbC	0.893	3	60.10	OH
I_PREN	isoprene	C ₅ H ₈	ppbC	0.607	5	68.11	O
T2PENE	t-2-pentene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
C2PENE	c-2-pentene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
mecl2	methylene chloride	CH ₂ CL ₂	ppbC	3.784	1	84.93	X
B2E2M	2-methyl-2-butene	C ₅ H ₁₀	ppbC	0.625	5	70.13	O
tbuoh	t-butanol		ppbC	0.937	4	84.16	OH
f113	F113 (trichlorotrifluoroeth)	C ₂ F ₃ Cl ₃	ppbC	4.174	2	187.38	X
BU22DM	2,2-dimethylbutane	C ₆ H ₁₄	ppbC	0.640	6	86.17	P
PRAL2M	2-methylpropanal	C ₃ H ₇ CHO	ppbC	0.803	4	72.09	AL
CPENTE	cyclopentene	C ₅ H ₈	ppbC	0.607	5	68.11	O
meacro	methacrolein		ppbC	1.561	2	70.09	AL
P1E4ME	4-methyl-1-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
P1E3ME	3-methyl-1-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
CPENTA	cyclopentane	C ₅ H ₁₀	ppbC	0.625	5	70.13	CA
BU23DM	2,3-dimethylbutane	C ₆ H ₁₄	ppbC	0.640	6	86.17	P
MTBE	methyl-t-butylether	C ₅ H ₁₂ O	ppbC	0.899	4.37	88.14	E

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
PENA2M	2-methylpentane	C ₆ H ₁₄	ppbC	0.640	6	86.17	P
bual	butanal	C ₃ H ₇ CHO	ppbC	0.803	4	72.09	AL
mek	methyl ethyl ketone	C ₄ H ₈ O	ppbC	0.803	4	72.09	K
PEN22M	2,2-dimethylpentane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
PENA3M	3-methylpentane	C ₆ H ₁₄	ppbC	0.640	6	86.17	P
P1E2ME	2-methyl-1-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
HEX1E	1-hexene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
c6ole1	C6 Olefin	C6H12	ppbC	0.625	6	84.16	O
N_HEX	n-hexane	C ₆ H ₁₄	ppbC	0.640	6	86.17	P
ccl3	chloroform	CHCl ₃	ppbC	5.319	1	119.38	X
T3HEXE	t-3-hexene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
T2HEXE	t-2-hexene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
P2E2ME	2-methyl-2-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
P2E3MC	cis-3-methyl-2-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
C3HEXE	c-3-hexene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
C2HEXE	c-2-hexene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
P2E3MT	trans-3-methyl-2-pentene	C ₆ H ₁₂	ppbC	0.625	6	84.16	O
MCYPNA	methylcyclopentane	C ₆ H ₁₂	ppbC	0.625	6	84.16	P
PEN24M	2,4-dimethylpentane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
meccl3	methyl chloroform	C ₂ H ₃ Cl ₃	ppbC	2.659	2	119.38	X
BU223M	2,2,3-trimethylbutane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
CPENE1	1-methylcyclopentene	C ₆ H ₇	ppbC	0.610	6	82.15	O
BENZE	benzene	C ₆ H ₆	ppbC	0.580	6	78.11	A
PEN33M	3,3-dimethylpentane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
CYHEXA	cyclohexane	C ₆ H ₁₂	ppbC	0.625	6	84.16	CA
HEXE4M	4-methylhexene	C ₇ H ₁₆	ppbC	0.625	7	98.19	P
HEXA2M	2-methylhexane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
PEN23M	2,3-dimethylpentane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
CYHEXE	cyclohexene	C ₆ H ₁₀	ppbC	0.610	6	82.15	O
HEXA3M	3-methylhexane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
c7ole1	C7 olefin-1	C7H14	ppbC	0.625	7	98.19	O
CPA13M	1,3-dimethylcyclopentane	C ₇ H ₁₄	ppbC	0.625	7	98.19	A
PA3ET	3-ethylpentane	C ₇ H ₁₆	ppbC	0.558	8	100.20	P
hept1e	1-heptene		ppbC	0.625	7	98.18	O
PA224M	2,2,4-trimethylpentane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
c7ole2	C7 olefin-2	C7H14	ppbC	0.625	7	98.19	O
T3HEPE	t-3-heptene	C ₇ H ₁₄	ppbC	0.625	7	98.19	O
N_HEPT	n-heptane	C ₇ H ₁₆	ppbC	0.638	7	100.20	P
c8ole1	C8 olefin-1	C8H16	ppbC	0.625	8	112.21	O
c8ole2	C8 olefin-2	C8H16	ppbC	0.625	8	112.21	O
c8ole3	C8 olefin-3	C8H16	ppbC	0.625	8	112.21	O
P1E244	2,4,4-trimethyl-1-pentene	C ₈ H ₁₆	ppbC	0.625	8	112.21	O
MECYHX	methylcyclohexane	C ₇ H ₁₄	ppbC	0.625	7	98.19	P
c8pa1	C8 paraffin-1	C8H18	ppbC	0.636	8	114.23	P
HEX25M	2,5-diethylhexane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
HEX24M	2,4-diethylhexane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
c8pa2	C8 paraffin-2	C8H18	ppbC	0.636	8	114.23	P
PA234M	2,3,4-trimethylpentane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
TOLUE	toluene	C ₇ H ₈	ppbC	0.586	7	92.14	A
HX23DM	2,3-dimethylhexane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
HEP2ME	2-methylheptane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
HEP4ME	4-methylheptane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
c8pa3	C8 paraffin-3	C8H18	ppbC	0.636	8	114.23	P
HEP3ME	3-methylheptane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
hexal	hexanal	C ₅ H ₁₁ CHO	ppbC	0.744	6	100.16	AL
HEX225	2,2,5-trimethylhexane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
OCT1E	octene-1	C ₈ H ₁₆	ppbC	0.625	8	112.21	O
CHX11M	1,1-dimethylcyclohexane	C ₈ H ₁₆	ppbC	0.625	8	112.21	P
N_OCT	n-octane	C ₈ H ₁₈	ppbC	0.636	8	114.23	P
HEX235	2,3,5-trimethylhexane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
HEP24D	2,4-dimethylheptane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
c9ole2	C9 olefin-2	C ₉ H ₁₈	ppbC	0.625	9	126.24	O
HEP44D	4,4-dimethylheptane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
HEP26D	2,6-dimethylheptane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
HEP25D	2,5-dimethylheptane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
HEP33D	3,3-dimethylheptane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
c9ole1	C9 olefin-1	C ₉ H ₁₈	ppbC	0.625	9	126.24	O
ETBZ	ethylbenzene	C ₈ H ₁₀	ppbC	0.591	8	106.16	A
c9ole3	C9 olefin-3	C ₉ H ₁₈	ppbC	0.625	9	126.24	O
MP_XYL	m- & p-xylene	C ₈ H ₁₀	ppbC	0.591	8	106.16	A
OCT2ME	2-methyloctane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
OCT3ME	3-methyloctane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
c9par1	C9 paraffin-1	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
STYR	styrene	C ₈ H ₈	ppbC	0.580	8	104.14	A
O_XYL	o-xylene	C ₈ H ₁₀	ppbC	0.591	8	106.17	A
none1	1-nonene	C ₉ H ₁₈	ppbC	0.625	9	126.24	O
c9par2	C9 paraffin-2	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
N_NON	n-nonane	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
c9par3	C9 paraffin-3	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
c9ole4	C9 olefin-4	C ₉ H ₁₈	ppbC	0.625	9	126.24	O
c9par4	C9 paraffin-4	C ₉ H ₂₀	ppbC	0.635	9	128.26	P
IPRBZ	isopropylbenzene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
IPCYHX	isopropylcyclohexane	C ₉ H ₁₈	ppbC	0.625	9	126.28	P
benzal	benzaldehyde	C ₇ H ₆ O	ppbC	0.675	7	106.12	AL
OCT26D	2,6-dimethyloctane	C ₁₀ H ₂₂	ppbC	0.634	10	142.29	P
A_PINE	alpha-pinene	C ₁₀ H ₁₆	ppbC	0.607	10	136.23	O
OCT36M	3,6-dimethyloctane	C ₁₀ H ₂₂	ppbC	0.634	10	142.29	P
N_PRBZ	n-propylbenzene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
M_ETOL	m-ethyltoluene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
P_ETOL	p-ethyltoluene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
BZ135M	1,3,5-trimethylbenzene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
c10p_a	C10 paraffin-a	C ₁₀ H ₂₂	ppbC	0.634	10	142.29	P
O_ETOL	o-ethyltoluene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
octal	octanal	C ₉ H ₁₆ O	ppbC	0.714	8	128.22	AL
B_PINE	beta-pinene	C ₁₀ H ₁₆	ppbC	0.607	10	136.23	O
DEC1E	1-decene		ppbC	0.625	10	140.27	O
BZ124M	1,2,4-trimethylbenzene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
N_DEC	n-decane	C ₁₀ H ₂₂	ppbC	0.634	10	142.29	P
c10ar1	C10 aromatic -1	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
I_BUBZ	isobutylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
S_BUBZ	sec-butylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c10ol2	C10 olefin-2	C ₁₀ H ₂₀	ppbC	0.625	10	140.27	O
BZ123M	1,2,3-trimethylbenzene	C ₉ H ₁₂	ppbC	0.595	9	120.20	A
c10p_c	C10 paraffin-c	C ₁₀ H ₂₂	ppbC	0.634	10	142.29	P
LIMON	limonene	C ₁₀ H ₁₆	ppbC	0.607	10	136.23	O
indan	indan	C ₉ H ₁₀	ppbC	0.585	9	118.17	A
indene	indene	C ₉ HC ₈	ppbC	0.575	9	116.15	A
DETBJ1	1,3-diethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c10ar2	C10 aromatic -2	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
DETBJ2	1,4-diethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
N_BUBZ	n-butylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
DETBJ3	1,2-diethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c10ar3	C10 aromatic -3	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
BZDME	1,3-dimethyl-4-ethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c10ar4	C10 aromatic -4	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c10ar5	C10 aromatic -5	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
IPRTOL	isopropyltoluene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
nonal	nonanal	C ₉ H ₁₈ O	ppbC	0.704	9	142.24	AL
UNDE1E	1-undecene		ppbC	0.625	11	154.30	O
N_UNDE	n-undecane	C ₁₁ H ₂₄	ppbC	0.633	11	156.30	P

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI)

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
c10ar6	C10 aromatic -6	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
c11p_a	C11 paraffin-a		ppbC	0.600	11	148.25	P
bz1245	1,2,4,5-tetramethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
bz1235	1,2,3,5-tetramethylbenzene	C ₁₀ H ₁₄	ppbC		10	134.22	A
bz1234	1,2,3,4-tetramethylbenzene	C ₁₀ H ₁₄	ppbC	0.598	10	134.22	A
ind_2m	2-methylindan	C ₁₀ H ₁₂	ppbC	0.589	10	132.21	A
ind_1m	1-methylindan	C ₁₀ H ₁₂	ppbC	0.589	10	132.21	A
c11ar1	c11 aromatic -1		ppbC	0.600	11	148.25	A
c11ar3	c11 aromatic -3		ppbC	0.600	11	148.25	A
dode1e	1-dodecene	C ₁₂ H ₂₄	ppbC	0.632	12	170.34	O
naphth	naphthalene	C ₁₀ H ₈	ppbC	0.571	10	128.16	A
n_dode	n-dodecane	C ₁₂ H ₂₆	ppbC	0.528	12	142.29	P
idnmhc	idnmhc, canister/FID		ppbC	0.617	1	13.85	
unid	unidentified canister/GC-FID			0.617	1	13.85	
idoxy	id oxygenates, canister/FID		ppbC				
idothr	id others, canister/FID		ppbC				
etbz	ethylbenzene		$\mu\text{g}/\text{m}^3$	1.000	8	106.17	A
mp_xyl	m&p-xylene	C ₈ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	8	106.17	A
cyheone	cyclohexanone		$\mu\text{g}/\text{m}^3$	1.000	6	98.15	K
meoct2	2-methyloctane		$\mu\text{g}/\text{m}^3$	1.000	9	120.20	P
heptone	2-heptanone		$\mu\text{g}/\text{m}^3$	1.000	7	114.19	K
oct3me	3-methyloctane	C ₉ H ₂₀	$\mu\text{g}/\text{m}^3$	1.000	9	128.26	P
styr	styrene	C ₈ H ₈	$\mu\text{g}/\text{m}^3$	1.000	8	104.15	A
hepal	heptanal		$\mu\text{g}/\text{m}^3$	1.000	7	114.19	AL
o_xyl	o-xylene	C ₈ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	8	106.17	A
none1	1-nonene	C ₉ H ₁₈	$\mu\text{g}/\text{m}^3$	1.000	9	126.24	O
n_non	nonane	C ₉ H ₂₀	$\mu\text{g}/\text{m}^3$	1.000	9	128.26	P
iprbz	isopropylbenzene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
prcyhex	propylcyclohexane		$\mu\text{g}/\text{m}^3$	1.000	9	126.24	P
hepenal	t-2-heptenal		$\mu\text{g}/\text{m}^3$	1.000	7	112.17	AL

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
bzalde	benzaldehyde	C ₇ H ₆ O	$\mu\text{g}/\text{m}^3$	1.000	7	106.12	AL
a_pine	alpha-Pinene	C ₁₀ H ₁₆	$\mu\text{g}/\text{m}^3$	1.000	10	136.24	O
dmoct	dimethyloctane		$\mu\text{g}/\text{m}^3$	1.000	10	142.28	P
n_prbz	propylbenzene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
bznit	benzonitrile		$\mu\text{g}/\text{m}^3$	1.000	7	103.12	7
m_etol	m-ethyltoluene		$\mu\text{g}/\text{m}^3$	1.000	9	120.00	A
p_etol	p-ethyltoluene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
bz135m	1,3,5-trimethylbenzene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
PHENOL	phenol		$\mu\text{g}/\text{m}^3$	1.000	6	94.11	A
o_etol	o-ethyltoluene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.00	A
b_pine	beta-pinene	C ₁₀ H ₁₆	$\mu\text{g}/\text{m}^3$	1.000	10	136.24	O
FURBZ	2,3-benzofuran		$\mu\text{g}/\text{m}^3$	1.000	8	118.14	K
FURPEN	2-pentylfuran		$\mu\text{g}/\text{m}^3$	1.000	9	138.21	A
t_bubz	t-butylbenzene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
OCTAL	octanal	C ₉ H ₁₆ O	$\mu\text{g}/\text{m}^3$	1.000	8	128.22	A
bz124m	1,2,4-trimethylbenzene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
MESTYR	4-methylstyrene		$\mu\text{g}/\text{m}^3$	1.000	9	118.18	A
mpcbz	1,3-dichlorobenzene		$\mu\text{g}/\text{m}^3$	1.000	6	146.00	X
dec1e	1-decene		$\mu\text{g}/\text{m}^3$	1.000	10	140.27	O
i_bubz	isobutylbenzene	C ₁₀ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
n_dec	decane	C ₁₀ H ₂₂	$\mu\text{g}/\text{m}^3$	1.000	10	142.29	P
s_bubz	sec-butylbenzene	C ₁₀ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
bz123m	1,2,3-trimethylbenzene	C ₉ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	9	120.20	A
m_iprtol	m-isopropyltoluene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
p_iprtol	p-isopropyltoluene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
odcbz	1,2-dichlorobenzene	C ₆ H ₄ Cl ₂	$\mu\text{g}/\text{m}^3$	1.000	6	146.00	X
INDAN	indan	C ₉ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	9	118.18	A
limon	(+/-)-limonene	C ₁₀ H ₁₆	$\mu\text{g}/\text{m}^3$	1.000	10	136.24	O
INDENE	indene		$\mu\text{g}/\text{m}^3$	1.000	9	116.00	A
o_iprtol	o-isopropyltoluene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
O_MEPHOL	o-methylphenol		$\mu\text{g}/\text{m}^3$	1.000	7	108.00	A
detbz1	1,3-diethylbenzene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
ACPHONE	Acetophenone		$\mu\text{g}/\text{m}^3$	1.000	8	120.15	K
M_TOLALD	m-tolualdehyde		$\mu\text{g}/\text{m}^3$	1.000	8	120.00	AL
tol4pr	4-n-propyltoluene + 1,4-diethylbenzene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
butbz	Butylbenzene	C4H6	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
m_xylet5	5-ethyl-m-xylene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
detbz3	1,2-diethylbenzene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
MP_MEPHO	m/p-methylphenol		$\mu\text{g}/\text{m}^3$	1.000	7	108.14	A
tol2pr	2-n-propyltoluene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
guacol	guaiacol		$\mu\text{g}/\text{m}^3$	1.000	7	124.14	K
p_xylet2	2-ethyl-p-xylene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
o_xylet4	4-ethyl-o-xylene		$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
tbutol_4	4-tert-butyltoluene		$\mu\text{g}/\text{m}^3$	1.000	11	148.24	A
NONAL	nonanal	C ₉ H ₁₈ O	$\mu\text{g}/\text{m}^3$	1.000	9	142.24	AL
unde1e	1-undecene		$\mu\text{g}/\text{m}^3$	1.000	11	154.30	O
fubz2me	2-methylbenzofuran		$\mu\text{g}/\text{m}^3$	1.000	9	132.13	K
n_unde	undecane	C ₁₁ H ₂₄	$\mu\text{g}/\text{m}^3$	1.000	11	156.31	P
IPRXYL_5	5-isopropyl-m-xylene		$\mu\text{g}/\text{m}^3$	1.000	11	148.24	A
BZ1245	1,2,4,5-tetramethylbenzene	C ₁₀ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
BZ1235	1,2,3,5-tetramethylbenzene	C ₁₀ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
IAMBZ	isoamylbenzene		$\mu\text{g}/\text{m}^3$	1.000	11	148.24	A
IND_2M	2-methylindan	C ₁₀ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	10	132.21	A
IND_1M	1-methylindan	C ₁₀ H ₁₂	$\mu\text{g}/\text{m}^3$	1.000	10	132.21	A
BZ1234	1,2,3,4-tetramethylbenzene	C ₁₀ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	10	134.22	A
DIPRB_13	1,3-diisopropylbenzene		$\mu\text{g}/\text{m}^3$	1.000	12	162.28	A
C5BZ_3	Pentylbenzene		$\mu\text{g}/\text{m}^3$	1.000	11	148.25	A
THNAPH	1,2,3,4-tetrahydronaphthalene		$\mu\text{g}/\text{m}^3$	1.000	10	132.21	A
DHNAPH	1,2-dihydronaphthalene		$\mu\text{g}/\text{m}^3$	1.000	10	130.19	A
DIPRB_14	1,4-diisopropylbenzene		$\mu\text{g}/\text{m}^3$	1.000	12	162.28	A

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
NAPHTH	naphthalene	C ₁₀ H ₈	$\mu\text{g}/\text{m}^3$	1.000	10	128.16	A
INDDMA	A-dimethylindane	C ₁₁ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	11	146.23	A
INDDMB	B-dimethylindane	C ₁₁ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	11	146.23	A
INDDMC	C-dimethylindane	C ₁₁ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	11	146.23	A
INDDMD	D-dimethylindan	C ₁₁ H ₁₄	$\mu\text{g}/\text{m}^3$	1.000	11	146.23	A
DECONE2	2-decanone		$\mu\text{g}/\text{m}^3$	1.000	12	156.27	K
DECAL	decanal		$\mu\text{g}/\text{m}^3$	1.000	10	156.27	AL
DODE1E	dodecene	C ₁₂ H ₂₄	$\mu\text{g}/\text{m}^3$	1.000	12	170.34	O
N_DODE	dodecane	C ₁₂ H ₂₆	$\mu\text{g}/\text{m}^3$	1.000	12	142.29	P
PMEBZ	pentamethylbenzene		$\mu\text{g}/\text{m}^3$	1.000	11	148.25	A
NAP_2M	2-methylnaphthalene	C ₁₁ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	11	142.20	A
NAP_1M	1-methylnaphthalene	C ₁₁ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	11	142.20	A
N_TRID	tridecane	C ₁₃ H ₂₈	$\mu\text{g}/\text{m}^3$	1.000	13	184.37	P
GNONLA	g-nonanoic lactone		$\mu\text{g}/\text{m}^3$	1.000	9	156.23	K
EUGOL	eugenol		$\mu\text{g}/\text{m}^3$	1.000	10	164.20	K
BIPHEN	Biphenyl		$\mu\text{g}/\text{m}^3$	1.000	12	154.21	A
ENAP12	1+2-ethylnaphthalene		$\mu\text{g}/\text{m}^3$	1.000	12	156.23	A
DMN267	2,6+2,7-dimethylnaphthalene		$\mu\text{g}/\text{m}^3$	1.000	12	156.23	A
N_TETD	tetradecane	C ₁₄ H ₃₀	$\mu\text{g}/\text{m}^3$	1.000	14	198.40	P
DM1367	1,6+1,3+1,7-dimethylnaphthalene		$\mu\text{g}/\text{m}^3$	1.000	12	156.23	A
D14523	2,3+1,5+1,4-dimethylnaphthalene		$\mu\text{g}/\text{m}^3$	1.000	12	156.23	A
ISOEUG	isoeugenol		$\mu\text{g}/\text{m}^3$	1.000	10	164.20	K
ACENAP	Acenaphthylene	C ₁₂ H ₈	$\mu\text{g}/\text{m}^3$	1.000	12	152.20	A
gdecla	g-decanolactone		$\mu\text{g}/\text{m}^3$	1.000	10	170.25	L
DMN12	1,2-dimethylnaphthalene		$\mu\text{g}/\text{m}^3$	1.000	12	156.23	A
ACENPE	Acenaphthene	C ₁₂ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	12	154.21	A
N_PEND	pentadecane	C ₁₅ H ₃₂	$\mu\text{g}/\text{m}^3$	1.000	15	212.42	P
UNGLAC	Undecanoic-g-lactone		$\mu\text{g}/\text{m}^3$	1.000	11	184.28	K
FLUORE	Fluorene		$\mu\text{g}/\text{m}^3$	1.000	13	166.22	A

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^g	C_no	MW	Group ^h
N_HEXD	Hexadecane	C ₁₆ H ₃₄	$\mu\text{g}/\text{m}^3$	1.000	16	226.45	P
N_HEPD	heptadecane	C ₁₇ H ₃₆	$\mu\text{g}/\text{m}^3$	1.000	17	240.48	P
PHENA	phenanthrene	C ₁₄ H ₁₀	$\mu\text{g}/\text{m}^3$	1.000	14	178.23	A
N_OCTD	octadecane	C ₁₈ H ₃₈	$\mu\text{g}/\text{m}^3$	1.000	18	254.50	P
N_NOND	nonadecane	C ₁₉ H ₄₀	$\mu\text{g}/\text{m}^3$	1.000	19	268.53	P
N_EICO	eicosane	C ₂₀ H ₄₂	$\mu\text{g}/\text{m}^3$	1.000	20	282.56	P
geapla	caprolactone		$\mu\text{g}/\text{m}^3$	1.000	6	114.14	L
tidnmhc	id NMHC by tenax/GC-FID		$\mu\text{g}/\text{m}^3$	1.000			
tunid	unidentified tenax/GC-FID		$\mu\text{g}/\text{m}^3$	1.000			
t_bkg			$\mu\text{g}/\text{m}^3$	1.000			
tidothr	id others by tenax/GC-FID		$\mu\text{g}/\text{m}^3$	1.000			
FORMAL	formaldehyde	HCHO	ppbv	1.472	1	33.03	AL
ACETAL	acetaldehyde	CH ₃ CHO	ppbv	1.963	2	44.05	AL
ACETO	acetone	C ₃ H ₆ O	ppbv	2.588	3	58.08	K
ACROLN	acrolein	C ₃ H ₄ O	ppbv	2.498	3	56.07	AL
PROAL	propionaldehyde	C ₂ H ₅ CHO	ppbv	2.588	3	58.08	AL
CROTON	crotonaldehyde	C ₃ H ₅ CHO	ppbv	3.123	4	70.09	AL
MEK	methyl ethyl ketone	C ₄ H ₈ O	ppbv	3.212	4	72.09	K
acrolx	acrolein-X				3		
MEACRO	methacrolein	C ₄ H ₅ CHO	ppbv	3.123	2	70.09	AL
BUAL	butanal	C ₃ H ₇ CHO	ppbv	3.212	4	72.09	AL
BENZAL	benzaldehyde	C ₇ H ₆ O	ppbv	4.728	7	106.13	AL
glyoxl	glyoxal	OCHCHO	ppbv	2.586	2	58.04	AL
VALAL	valeraldehyde	C ₄ H ₉ CHO	ppbv	3.838	5	86.14	AL
TOLUAL	tolualdehyde	C ₈ H ₈ O	ppbv	5.353	8	120.16	AL
HEXAL	hexanal	C ₅ H ₁₁ CHO	ppbv	4.462	6	100.16	AL
F12	F12 (dichlorodifluoromethane)	CF ₂ Cl ₂	ppbv	5.387	1	120.91	X
F114	F114 (dichlorotetrafluoroeth)	C ₂ F ₄ Cl ₂	ppbv	7.614	1	170.91	X
MEBR	methylbromide	CH ₃ BR	ppbv	4.230	1	94.94	X
F11	F11 (trichlorofluoromethane)	CFCl ₃	ppbv	6.120	1	137.37	X

Table J-4. List of abbreviations used by DRI to identify species reported in Special Study samples (from DRI).

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Species	Compound Name	Formula	Units	to $\mu\text{g}/\text{m}^3$ ^a	C_no	MW	Group ^b
VINECL	vinylidenechloride	$\text{C}_2\text{H}_2\text{Cl}_2$	ppbv	4.319	2	96.94	X
MECL2	methylene chloride	CH_2Cl_2	ppbv	3.784	1	84.93	X
F113	F113 (trichlorotrifluoroeth)	$\text{C}_2\text{F}_3\text{Cl}_3$	ppbv	8.348	2	187.38	X
T12DCE	trans-1,2-dichloroethylene	$\text{C}_2\text{H}_2\text{Cl}_2$	ppbv	4.319	2	96.94	X
C12DCE	cis-1,2,-dichloroethylene	$\text{C}_2\text{H}_2\text{Cl}_2$	ppbv	4.319	1	96.94	X
CCL3	chloroform	CHCl_3	ppbv	5.319	1	119.38	X
ETDC12	1,2-dichloroethane	$\text{C}_2\text{H}_4\text{Cl}_2$	ppbv	4.409	2	98.96	X
MECCL3	methyl chloroform	$\text{C}_2\text{H}_3\text{Cl}_3$	ppbv	5.319	2	119.38	X
CCL4	carbon tetrachloride	CCl_4	ppbv	6.853	1	153.82	X
DBRME	dibromomethane	CH_2Br_2	ppbv	7.745	1	173.85	X
TCENE	trichloroethylene	$\text{C}_2\text{H}_3\text{Cl}_3$	ppbv	5.854	2	131.39	X
T13DCP	trans-1,3-dichloropropene		ppbv	4.944	3	110.97	X
C13DCP	cis-1,3-dichloropropene	$\text{C}_3\text{H}_4\text{Cl}_2$	ppbv	4.944	3	110.97	X
TCE112	1,1,2-trichloroethane	$\text{C}_2\text{H}_3\text{Cl}_3$	ppbv	5.944	2	133.41	X
CLDBRM	chlorodibromomethane	CHClBr_2	ppbv	9.279	1	208.28	X
ETDB12	1,2-dibromoethane	$\text{C}_2\text{H}_4\text{Br}_2$	ppbv	8.370	2	187.87	X
PERC	perchloroethylene (tetra)	C_2Cl_4	ppbv	7.388	2	165.83	X
CLBZ	chlorobenzene	$\text{C}_6\text{H}_5\text{Cl}$	ppbv	5.014	6	112.55	X
TCLETH	1,1,2,2-tetrachloroethane	C_2HCl_3	ppbv	7.478	2	167.85	X
MDCBZ	m-dichlorobenzene	$\text{C}_6\text{H}_4\text{Cl}_2$	ppbv	6.549	6	147.00	X
PDCBZ	p-dichlorobenzene	$\text{C}_6\text{H}_4\text{Cl}_2$	ppbv	6.549	6	147.00	X
ODCBZ	o-dichlorobenzene	$\text{C}_6\text{H}_4\text{Cl}_2$	ppbv	6.549	6	147.00	X

^a Definition of sums of species.

PAMS
OTHER
UNID
TNMHC
IDNMHC_p
UNID_p
IDOXY
CARB
HALO
TENAX11

^b ppbC to $\mu\text{g}/\text{m}^3$ @ 1 atm, 298 K: $\mu\text{g}/\text{m}^3 = \text{ppbC} * (\text{mw}/22.4457 * \text{C}_\text{no})$ and ppbv to $\mu\text{g}/\text{m}^3$ @ 1 atm, 298 K: $\mu\text{g}/\text{m}^3 = \text{ppbv} * (\text{mw}/22.4457)$

^c A = aromatic, AL = Aldehyde, O = alkene (olefin), P = parafin, Y = alkyne, K = ketone, E = ether, X = haogenated, OH = alcohols, CA = cycloalkanes, Gu=guaiacols, Sy=syringols, L=lactones, St=steranes, Ho=Hopanes, PA=aliphatic acids, OA= alkenoic acids, AA=aromatic acids, AAL=aromatic aldehydes

ⁱ MDL based on 40.7 m^3